



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION III  
1650 Arch Street  
Philadelphia, Pennsylvania 19103-2029**

**Statement of Basis**

for

**U.S. EPA's Underground Injection Control (UIC)  
Class III G Injection Well Permit Identified as  
VAS3G931BSMY**

for

**Texas Brine Company Saltville, LLC  
864 Ader Lane  
Saltville, VA 24370-4309**

for

A project consisting of seven (7) Class III G injection wells used for the solution mining of salt located at the Saltville High Pressure Brine Field in Smyth and Washington Counties, Saltville, Virginia 24370.

On August 18, 1995 Virginia Gas Company submitted UIC permit applications and requested both a Class III G solution mining injection well permit and a Class I industrial brine disposal well permit for the construction and operation of three (3) injection wells in each well class. Virginia Gas Company intended to inject fresh water into a salt formation to dissolve the salt and create a cavern for the purpose of storing natural gas. The process of dissolving the salt and creating the cavern is called solution mining and requires a Class III G permit. The brine created from this solution mining process was to have been disposed through deep Class I industrial brine disposal wells. That application and subsequent amendments were deemed complete by EPA on February 15, 1996 and, after public notice, final permits were issued on April 29, 1996.

Since the issuance of these two permits, Virginia Gas Pipeline Company (formerly Virginia Gas Company) revised the scope of the project. On November 17, 2003, EPA received a letter and permit modification application from Virginia Gas Pipeline Company requesting a major revision to the Class III G permit and termination of the Class I permit. Virginia Gas Pipeline requested that the UIC Class III permit be expanded from three to six injection wells. The primary purpose of the permit revision allowed brine from the Company's holding ponds, as well as discharge water from its brine evaporation facility, to be injected into Virginia Gas Pipeline's existing and expanding gas well cavern gallery. The injection of fresh water was also permitted as make-up water on an as needed basis. EPA granted both the permit expansion and permit termination request on February 24, 2004. On February 24, 2007, EPA again transferred



ownership of the six well Class III G permit to Texas Brine Company Saltville, LLC to operate the six injection wells solely for solution mining. The salt solution is produced into commercial salt products for agriculture, the swimming pool industry and domestic use. On February 11, 2011, Texas Brine Company Saltville, LLC submitted an application for a major permit modification to EPA requesting that the permit be expanded from six wells to seven wells. This will enable the company to develop additional brine solution to feed their commercial salt production operation.

The draft permit specifies conditions for the construction, operation, monitoring, reporting and plugging and abandonment of the Class III G injection wells. These conditions are specified so as to prevent the movement of fluids into an underground source of drinking water. General provisions for EPA UIC permit requirements are found at 40 CFR Parts 144 and 146. Some of the major permit conditions specific to this project are as follows:

**Area of Review:** This is the area surrounding the project which the applicant must research, and then develop, a program for corrective action to address any wells which penetrate the injection zone and which may provide conduits for fluid migration. The Area of Review for this project is equal to the size of each cavern created during the brine injection solution mining process. The applicant has provided documentation on the well population within this Area of Review after research of local, County and State well records. No wells requiring corrective action have been found within the Area of Review. However, if a well should be located at a later date, corrective action will be performed on that well in the form of plugging and abandonment of that well.

**Underground Sources of Drinking Water (USDW):** USDWs are defined by the UIC regulations as aquifers of portions thereof which contain waters that have 10,000 parts per million (mg/l) or less of Total Dissolved Solids and which are being or could be used as a source of drinking water. The applicant has identified the lowermost USDW's depth to be approximately 1050 feet below land surface elevation. This depth depends on the surrounding surficial topography. The geologic name of this fresh water bearing formation is the Honaker Dolomite. The proposed construction of each injection well meets the regulatory criteria of 40 CFR Section 146.32. In addition, each permit requires surface casing to be placed to at least 50 feet below the lowermost USDW and cemented back to the surface. The permit also requires the Class III wells to have their long string (production) casing to be cemented back to the surface.

**Injection and Confining Zones:** Injection of fluids for the Class III wells will be limited by the permit to the MacCraday Formation in the subsurface interval between 1904 feet and 3954 feet. The injection zone is thus separated from the lowermost USDW by an interval of between 850 feet to 2900 feet, while the confining zone, immediately adjacent to the injection zone is comprised of salt, shale and dolomite.

**Injection Fluid:** The Class III permit limits the injection fluid to the use of water from the existing brine holding ponds, evaporator distillate from the evaporator plant or fresh water from on-site shallow ground water wells. The maximum daily volume expected to be injected is 16,000 barrels per gallery.

**Maximum Injection Pressure:** The maximum allowable injection pressure for the Class III well operation will be limited to 1000 psi. This pressure limitation will meet the regulatory criteria of 40 CFR Section 146.33(a), as well as enable the proposed nature of the operation as specified by the applicant. The pressure is expressly limited to avoid the initiation of new fractures or the propagation of existing fractures in the injection zone and confining zones adjacent to the injection zone during injection operations.

**Monitoring and Reporting Requirements:** The permittee will be responsible for monitoring injection pressure and flow rate on a continuous basis. In addition, the permittee will keep daily records of injected and produced fluid volumes. Results of monitoring shall be submitted to the Director, quarterly, as specified by the dates in the permit. The permittee will also be required to conduct a mechanical integrity test (MIT) for the new injection well, once after the well's construction is complete, and once every five years thereafter. MIT tests are also required at least once every five years for each of the existing wells. These MIT tests will provide EPA with an evaluation of the integrity of the tubular goods (casing, tubing and packer) as well as documentation as to the absence of fluid movement into or between USDWs.

**Plugging and Abandonment:** The Company has submitted a plugging and abandonment plan that will result in environmentally protective well closures at the time of cessation of operations. The Company has also made a demonstration of financial responsibility in the form of a Surety Bond for \$350,000.00 and a Standby Trust Agreement that indicates adequate resources will be maintained for well closures and should preclude the possibility of abandonment without proper closure.

**Expiration Date:** A final Class III permit, when issued, will be in effect for the operational life of the facility, which includes proper well closure and abandonment. This proposed draft permit contains essentially the same conditions as the final permit will unless information is provided to EPA which would warrant alternative conditions or actions on this permit application.

**Additional Information:** Questions, comments and requests for additional information may be directed to the contact person listed below. A public hearing has been tentatively scheduled for Wednesday, July 20, 2011, at 7:00 PM at Saltville Town Hall, 217 Palmer Avenue, Saltville, Virginia. The public comment period on this permitting action will close on July 8, 2011. EPA will hold this public hearing only if the agency receives written expressions of public interest concerning a hearing no later than July 8, 2011. EPA also reserves the right to cancel this public hearing unless a significant degree of public interest is evidenced. Written requests for a hearing should be directed to James Bennett, Safe Drinking Water Act Branch (3WP22), Office of Compliance and Enforcement, 1650 Arch Street, Philadelphia, PA 19103, or you may call at 215-814-5469.

**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION III  
1650 Arch Street  
Philadelphia, Pennsylvania 19103-2029**

**UNDERGROUND INJECTION CONTROL PERMIT NUMBER VAS3G931BSMY  
AUTHORIZATION TO OPERATE SEVEN (7) CLASS III G INJECTION WELLS**

In compliance with provisions of the Safe Drinking Water Act, as amended, (42 U.S.C. §§ 300f-300j-11, commonly known as the SDWA), the Resource Conservation and Recovery Act (42 U.S.C. §§ 6901-6991i, commonly known as RCRA) and attendant regulations promulgated by the U. S. Environmental Protection Agency (EPA) under Title 40 of the Code of Federal Regulations (CFR),

Texas Brine Company Saltville, LLC  
4800 San Felipe  
Houston, Texas 77056

is authorized by this permit to inject fluids through seven (7) Class III G injection wells from a facility located at the Saltville Cavern Development Project in Saltville, Virginia into the MacCrady Formation in accordance with the conditions set forth herein.

All references to Title 40 of the CFR are to all regulations that are in effect on the date that this permit is effective.

This permit's effective issuance date of February 24, 2004 remains in effect.

This permit modification to allow the operation of seven (7) injection wells is effective as of \_\_\_\_\_, 2011.

This permit and its authorization to inject shall remain in effect for the operational life of the facility, which includes proper well closure, plugging and abandonment.

Signed this \_\_\_\_ day of \_\_\_\_\_, 2011.

**Jon M. Capacasa, Director  
Water Protection Division**

## PART I

### A. Effect of Permit

The permittee is allowed to engage in underground injection in accordance with the conditions of this permit. The underground injection activity, otherwise authorized by this permit, shall not allow the movement of fluid containing any contaminant into underground sources of drinking water, if the presence of that contaminant may cause a violation of any primary drinking water regulation under 40 CFR Part 141 or may otherwise adversely affect the health of persons. Any underground injection activity not authorized in this permit or otherwise authorized by rule is prohibited. Issuance of this permit does not convey property rights or mineral rights of any sort or any exclusive privilege; nor does it authorize any injury to persons or property, any invasion of other private rights, or any infringement of State or local law or regulations. Compliance with terms of this permit does not constitute a defense to any action brought under Part C and the imminent and substantial endangerment provisions in Part D of the Safe Drinking Water Act (SDWA) or any other common or statutory law for any breach of any other applicable legal duty.

### B. Permit Actions

This permit can be modified, revoked and reissued or terminated for cause as specified in 40 CFR §§ 144.12, 144.39 and 144.40. Also, the permit is subject to minor modifications as specified in 40 CFR § 144.41. The filing of a request for a permit modification, revocation and reissuance, or termination, or the notification of planned changes, or anticipated noncompliance on the part of the permittee shall not stay the applicability or enforceability of any permit condition.

### C. Severability

The provisions of this permit are severable, and if any provision of this permit or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit shall not be affected thereby.

### D. General Requirements

1. Duty to Comply. The permittee shall comply with all applicable UIC Program regulations and conditions of this permit. Any permit noncompliance constitutes a violation of the SDWA and is grounds for enforcement action, permit termination, revocation and reissuance, modification, or for denial of a permit renewal application.
2. Need to Halt or Reduce Activity Not a Defense. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

3. Duty to Mitigate. The permittee shall take all reasonable steps to minimize or correct any adverse impact on the environment resulting from noncompliance with this permit.
4. Proper Operation and Maintenance. The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control and related appurtenances which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance includes effective operational performance, effective site security, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems only when necessary to achieve compliance with the conditions of this permit.
5. Duty to Provide Information. The permittee shall furnish to the Director, within a time specified by the Director, any information which the Director may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The permittee shall also furnish to the Director, upon request, copies of records required to be kept by this permit. If the permittee becomes aware of any incomplete or incorrect information in the permit application or subsequent reports, the permittee shall promptly submit information addressing these deficiencies.
6. Inspection and Entry. The permittee shall allow the Director, or an authorized representative, upon the presentation of credentials and other documents as may be required by law to:
  - a. Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;
  - b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
  - c. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and
  - d. Sample or monitor any substances or parameters at any location, at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by SDWA.
7. Penalties. Any person who violates a permit requirement is subject to civil penalties, fines and other enforcement actions under the SDWA and may be subject to the same such actions pursuant to RCRA. Any person who willfully violates permit conditions is subject to criminal prosecution.

8. Transfer of Permits. This permit is not transferable to any person except after notice is sent on EPA Form 7520-7 and approval is given by the Director and the requirements of 40 CFR § 144.38 are satisfied. The Director may require modification or revocation of the permit to change the name of the permittee and incorporate such other requirements as may be necessary under the Safe Drinking Water Act.
9. Signatory Requirements.
- a. All reports required by this permit and other information requested by the Director shall be signed as follows:
    - (1) for a corporation, by a responsible corporate officer of at least the level of vice-president;
    - (2) for a partnership or sole proprietorship, by a general partner or the proprietor, respectively; or
    - (3) for a Municipality, State, Federal, or other public agency by either a principal executive or a ranking elected official.
  - b. A duly authorized representative of the official designated in paragraph a. above may also sign only if:
    - (1) the authorization is made in writing by a person described in paragraph a. above;
    - (2) the authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of plant manager, operator of a well or a well field, superintendent, or a position of equivalent responsibility. A duly authorized representative may thus be either a named individual or any individual occupying a named position; and
    - (3) the written authorization is submitted to the Director.
  - c. If an authorization under paragraph b. of this section is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of paragraph b. of this section must be submitted to the Director prior to or together with any reports, information or applications to be signed by an authorized representative.
  - d. Any person signing a document under paragraph a. or b. of this section shall make the following certification:

"I certify under the penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based upon my inquiry of the person(s) who may manage the system, or those persons directly responsible for gathering the information, the information submitted is to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

10. Confidentiality of Information.

- a. In accordance with 40 CFR Part 2, any information submitted to the Director pursuant to these permits may be claimed as confidential by the submitter. Any such claim must be asserted at the time of submission by stamping the words "confidential business information" on each page containing such information. If no claim is made at the time of submission, EPA may make the information available to the public without further notice. If a claim is asserted, the information will be treated in accordance with the procedures in 40 CFR Part 2.
- b. Claims of confidentiality for the following information will be denied:
  - (1) The name and address of any permit applicant or permittee.
  - (2) Information which deals with the existence, absence, or level of contaminants in drinking water.

11. State Laws. Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable State law or regulation.

PART II

A. General

Copies of all reports and notifications required by this permit shall be signed and certified in accordance with the requirements of Section D(9) of Part I of this permit and shall be submitted to the Director at the following address:

U.S. Environmental Protection Agency  
Water Protection Division  
Ground Water & Enforcement Branch (3WP22)  
1650 Arch Street  
Philadelphia, Pennsylvania 19103



**B. Record Retention**

1. The permittee shall retain records of all monitoring and other information required by this permit, including the following (if applicable), for a period of at least five years from the date of the sample, measurement, report or application, unless such records are required to be retained for a longer period of time under paragraphs B.2 and B.3 below. This period may be extended by request of the Director at any time.
  - a. All data required to complete the permit application form for this permit and any supplemental information submitted under 40 CFR § 144.31.
  - b. Calibrations and maintenance records and all original strip chart recordings for continuous monitoring instrumentation.
  - c. Copies of all reports required by this permit.
2. The permittee shall retain records concerning the nature and composition of all injected fluids, as listed in Part II, paragraph C.3. and C.4. of this permit, until three years after the completion of any plugging and abandonment procedures.
3. The permittee shall continue to retain the records after the above specified retention periods unless he or she delivers the records to the Director or obtains written approval from the Director to discard the records.
4. Records of monitoring information shall include:
  - a. The date, exact place, and the time of sampling or measurements;
  - b. The individual(s) who performed the sampling or measurements;
  - c. A precise description of both sampling methodology and the handling (custody) of samples;
  - d. The date(s) analyses were performed;
  - e. The individual(s) who performed the analyses;
  - f. The analytical techniques or methods used; and
  - g. The results of such analyses.
5. Monitoring of the nature of injected fluids shall comply with applicable analytical methods cited in Part II C.1., below.
6. All environmental measurements required by the permit, including, but not limited to measurements of pressure, temperature, mechanical integrity (as

applicable) and chemical analyses shall be done in accordance with EPA guidance on quality assurance.

### C. Monitoring Requirements

1. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity. The method used to obtain a representative sample of the fluid to be analyzed and the procedure for analysis of the sample shall be in accordance with test procedures approved under 40 CFR § 136.3 and Appendix III of 40 CFR Part 261 unless otherwise approved by the Director. The permittee shall identify the types of tests and methods used to generate the monitoring data.
2. Continuous recording devices shall be used to monitor injection pressure and flow rate beginning on the date on which the well commences operation and concluding when the well is plugged and abandoned. The permittee, through a metering device, shall also keep daily records of injected and produced fluid volumes as appropriate.
3. The permittee shall sample, analyze and record the nature of the injected fluid for the parameters listed below, once at the initiation of the injection operation and, thereafter, with sufficient frequency to yield representative data on its characteristics. If the injection fluid is modified, to the extent that the analysis required by § 146.34(a)(7)(iii) of the UIC regulations becomes incorrect or incomplete, a new analysis as required by Section 146.34(a)(7)(iii) shall be provided to the Director.

-pH	-Manganese
-Specific Gravity	-Total Dissolved Solids
-Specific Conductance	-Barium
-Sodium	-Hydrogen Sulfide
-Iron	-Dissolved Oxygen
-Magnesium	-TOC
-Chloride	
4. A demonstration of mechanical integrity in accordance with 40 CFR § 146.8 shall be made at least once every five years. Subsequent demonstrations shall be conducted no later than 30 days prior to the five year anniversary date of the initial demonstration. In addition to the above requirement, a mechanical integrity test demonstration shall be conducted whenever protective casing or tubing is removed from the well, the packer is resealed, or a well failure is evident. The permittee may continue operation only if he or she has successfully demonstrated to the Director the mechanical integrity of the permitted wells. The permittee shall cease injection operations if a loss of mechanical integrity becomes evident or if mechanical integrity cannot be demonstrated. Any such test shall be conducted in keeping with the notification requirements of Permit Condition D.12. of Part II of this permit. Results of this test shall be submitted with the first quarterly report after completion of the test.

5. The wells may be monitored on a field or project basis rather than an individual well basis by manifold monitoring. All wells must operate off of a common manifold and the operator must be able to demonstrate that manifold monitoring is comparable to individual well monitoring.

D. Reporting and Notification Requirements

1. Report on Permit Review. Within 30 days of receipt of this permit, the permittee shall report to the Director that he or she has read and is personally familiar with all terms and conditions of this permit.
2. Commencing Injection. The operator of a new injection well may not commence injection until construction is complete, and
  - a. The permittee has demonstrated to EPA that the injection well(s) has/have mechanical integrity in accordance with 40 CFR § 146.8 and the permittee has received written notice from the Director that such demonstration is satisfactory;
  - b. The permittee has submitted notice of completion of construction (EPA Form 7520-10) to the Director; and
  - c. The Director has inspected or otherwise reviewed the new injection well(s) and finds it is in compliance with the conditions of the permit; or
  - d. The permittee has not received notice from the Director of his or her intent to inspect or otherwise review the new injection well(s) within 13 days of the date of the notice in paragraph a. of this permit condition, in which case, prior inspection or review is waived and the permittee may commence injection.
3. Twenty-four Hour Reporting.
  - a. The permittee shall report to the Director any noncompliance which may endanger health or the environment. Such report shall be provided orally, to either James Bennett, Ground Water and Enforcement Branch, Environmental Engineer, at 215-814-5469 or Karen Johnson, Ground Water and Enforcement Branch, Chief, at 215-814-5445, within 24 hours from the time the permittee becomes aware of the circumstances. The following shall be included as information which must be reported orally within 24 hours:
    - (1) Any monitoring or other information which indicates that any contaminant may cause an endangerment to an underground source of drinking water.

- (2) Any noncompliance with a permit condition, or malfunction of the injection system which may cause fluid migration into or between underground sources of drinking water, or failure of mechanical integrity test demonstrations.
  - b. A written submission shall also be provided within five days of the time the permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.
4. Anticipated Noncompliance. The permittee shall give advance notice to the Director of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.
  5. Other Noncompliance. The permittee shall report all other instances of noncompliance in writing within ten (10) days of the time the permittee becomes aware of the circumstances. The reports shall contain the information listed in Permit Condition D.3., of Part II of this permit.
  6. Planned Changes. The permittee shall give notice to the Director as soon as possible of any planned physical alterations or additions to the permitted facility.
  7. Conversion. The permittee shall notify the Director thirty days prior to the conversion of the well to an operating status other than an injection well.
  8. Temporary Abandonment. The permittee shall notify the Director prior to the temporary abandonment of an injection well.
  9. Quarterly Reports. The permittee shall submit quarterly reports (using EPA Form 7520-11) to the Director summarizing the results of the monitoring required by Permit Condition C of Part II of this permit. These reports shall include each well's monthly monitoring records of injection pressure, flow rate, injection volume, and production volume, the results of any mechanical integrity test(s), and any major changes in characteristics or sources of injected fluids. The quarterly reports shall be submitted not later than April 30, July 31, October 31, and January 31. Each report will provide information from the previous three month period.
  10. Plugging and Abandonment Reports and Notifications.
    - a. The permittee shall notify the Director 45 days before the plugging and abandonment of the well. The Director may allow a shorter notice period upon written request.

- b. Revisions to the Plugging and Abandonment Plan must be submitted to the Director no less than 45 days prior to plugging and abandonment. The Director must approve the revisions prior to the start of plugging operations.
- c. Within 60 days after plugging the well, the permittee shall submit a report to the Director which shall consist of either:
  - (1) A statement that the well was plugged in accordance with the plan previously submitted to and approved by the Director; or
  - (2) Where actual plugging differed from the plan previously submitted, an updated version of the plan, on the form supplied by the Director, specifying the different procedures used. Any deviation from a previously approved plan, which may endanger Underground Sources of Drinking Water, is cause for the Director to require the operator to replug the well.

The report shall be certified as accurate by the person who performed the plugging operation.

- 11. Compliance Schedules. Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit shall be submitted no later than 30 days following each schedule date.
- 12. Mechanical Integrity Tests. The permittee shall notify the Director of his or her intent to conduct a mechanical integrity test at least 30 days prior to such a demonstration.
- 13. Cessation of Injection Activity. After a cessation of injection for two years the owner or operator shall plug and abandon the well in accordance with the Plugging and Abandonment Plan unless he or she:
  - a. Provides written notice to the Director; and
  - b. Describes actions or procedures, satisfactory to the Director, that the permittee will take to ensure that the well will not endanger USDWs during the period of temporary abandonment. These actions and procedures shall include compliance with the technical requirements applicable to an active injection well unless waived in writing by the Director.

E. Mechanical Integrity Standards

- 1. Standards. The permittee shall have and maintain the mechanical integrity of the permitted injection well pursuant to 40 CFR § 146.8.

2. Request from Director. The Director may, by written notice, require the permittee to demonstrate mechanical integrity at any time.

### PART III

#### A. Construction Requirements

1. Notwithstanding any other provision of this permit, the injection wells shall inject only into formations which are separated from any underground source of drinking water by a confining zone that is free of known open faults or fractures within the Area of Review.
2. Casing and Cementing. The permittee shall case and cement each well to prevent the movement of fluids into or between underground sources of drinking water. The casing and cement used in the construction of the well shall be designed for the life expectancy of the well and, at a minimum, the operation shall be conducted in accordance with the construction details described in the permittee's permit application as well as any conditions highlighted below. However, in all cases, cemented surface casing shall be installed from the surface to a depth at least fifty feet below the lowermost underground source of drinking water. In addition, the long string casing (production casing) shall be cemented back to the surface. Each well will also be completed with a 4 1/2 inch work string to enable the injection and production of fluid and to regulate cavern growth.
3. Logs and Tests. At a minimum, the following logs and/or tests shall be conducted during the drilling and construction of each injection well: For surface casing intended to protect underground sources of drinking water: gamma ray, resistivity, and caliper prior to the casing being installed and a cement bond/variable density or temperature log after the casing is set and cemented. For the long string casing: gamma ray, resistivity, and caliper prior to the casing being installed and a cement bond/variable density or temperature log after the casing is set and cemented.

The permittee shall submit a narrative report that interprets log and/or test results which specifically relate to the results of the cementing operation. Further, the narrative shall detail the rationale used to make these interpretations. The narrative report shall be prepared by a knowledgeable log analyst and submitted to the Director. The Director may prescribe additional logs or waive logging requirements in the future should field conditions so warrant.

4. Mechanical Integrity. Injection operations are prohibited until the permittee demonstrates that the well covered by this permit has mechanical integrity in accordance with 40 CFR § 146.8 and the permittee has received notice from the Director that such a demonstration is satisfactory in accordance with the provisions of Condition D.2. of Part II of this permit.
5. Corrective Action. Injection operations are prohibited until the permittee has successfully performed the activities detailed in the Corrective Action Plan

submitted in their Permit Application and hereby incorporated. If any abandoned well is discovered within the area of review as identified in the Permit Application, the permittee shall notify the Director upon discovery and within five (5) days, submit to the Director for approval, a plan for corrective action and implement the approved plan.

6. Completion Reports. The results of those activities required in Part III, Section A, 1 through 5 of this permit must be summarized and submitted to the Director prior to the commencement of injection operations as part of the Completion Reports.

#### B. Operating Requirements

1. Injection Formation. Injection shall be limited to the MacCrady Formation in the subsurface interval approximately 3100 feet below surface elevation.
2. Injection Fluid. The permittee shall not inject any hazardous substances, as defined by 40 CFR 261, nor any other fluid, other than, water from existing brine holding ponds, evaporator distillate from the evaporation plant, or fresh water obtained from shallow ground water wells on facility grounds.
3. Injection Volume Limitation. The facility's injection volume shall not exceed 16,000 barrels per cavern per day.
4. Injection Pressure Limitation. Injection pressure, measured at the surface, shall not exceed 1000 psi. Injection at a pressure which initiates new fractures or propagates existing fractures in the injection zone or in the confining zone adjacent to the injection zone or causes the movement of injection or formation fluids into an underground source of drinking water is prohibited.
5. Injection between the outermost casing protecting underground sources of drinking water and the well bore is prohibited, as is injection into any USDW.

#### C. Plugging and Abandonment

1. Plugging and Abandonment. The permittee shall plug and abandon the well in accordance with the approved plugging and abandonment plan (EPA Form 7520-14) provided in the Permit Application, which is hereby incorporated, and in accordance with the reporting and notification provisions of Section D.10. of Part II of this permit.
2. Plugging and Abandonment shall be conducted in such a manner that movement of fluids will not be allowed into or between underground sources of drinking water.

#### D. Financial Responsibility

1. The permittee shall maintain continuous compliance with the requirement to maintain financial responsibility and resources to close, plug and abandon the

underground injection well in the amount of at least \$50,000 per well (a total of \$350,000). If the acceptability of the Surety Performance Bond with Standby Trust Agreement should change, the permittee shall provide advance notification to the Director. The permittee shall not substitute an alternative demonstration of financial responsibility for that which the Director has approved, unless he or she has previously submitted evidence of that alternative demonstration to the Director and the Director notifies him or her that the alternative demonstration of financial responsibility is acceptable. The Director may require the permittee to submit a revised demonstration of financial responsibility if the Director has reason to believe that the original demonstration is no longer adequate to cover the costs of plugging and abandonment.

2. Insolvency of Financial Institution. In the event of the bankruptcy of the trustee or issuing institution of the financial mechanism, or a suspension or revocation of the authority of the trustee institution to act as trustee or the institution issuing the financial mechanism to issue such an instrument, the permittee must immediately notify the Director and submit an alternative demonstration of financial responsibility acceptable to the Director within sixty days after such event.



**U.S. Environmental Protection Agency, Region 3  
Water Protection Division, Office of Drinking Water & Source Water Protection  
Ground Water & Enforcement Branch (3WP22)  
1650 Arch Street  
Philadelphia, Pennsylvania 19103**

**Comments will be accepted until July 8, 2011**

The U.S. Environmental Protection Agency has developed a draft final Underground Injection Control (UIC) permit VAS3G931BSMY for Texas Brine Company Saltville, LLC under the authority of the UIC regulations at 40 CFR Parts 124, 144, 146, and 147. The permit is necessary for the continued operation of six (6) Class III G injection wells and the addition of one (1) Class III G well for a total of seven (7) Class III G wells used for the solution mining of salt.

**Description:** This permit was originally issued to Virginia Gas Company in April, 1996. Throughout the history of the facility's operation the permit has been transferred several times to different operators; the latest Texas Brine Company Saltville, LLC. The currently permitted injection wells have been successfully operated under this permit for the past several years. This major modification is for the addition of one (1) Class III G well in order to expand salt production. A permit is required to meet the provisions of the EPA administered UIC Program in Virginia.

**Opportunity for Comment:** The Administrative Record for this permitting action remains available for public inspection during normal business hours at:

EPA Region III  
Ground Water & Enforcement Branch  
Office of Drinking Water and Source Water Protection  
1650 Arch Street  
Philadelphia, Pennsylvania 19103

All information submitted by the applicant, unless deemed confidential, is available to the public in the Administrative Record. The Administrative Record includes the permit application, the permit's compliance history, draft permit, statement of basis and all related correspondence. A copy of the draft permit and statement of basis for this permitting action is available for review at:

Saltville Public Library  
111 Palmer Avenue  
Saltville, VA 24370

EPA solicits public comment on the proposal to reissue a final UIC permit for this facility. A public hearing has been tentatively scheduled for Wednesday, July 20, 2011, at 7:00 PM at:

Saltville Town Hall  
217 Palmer Avenue  
Saltville, VA 24370

Requests to hold this hearing must be received in the office listed below by July 8, 2011. When requesting a public hearing, please state the nature of the issues proposed to be raised. EPA expressly reserves the right to cancel this hearing unless a significant degree of public interest, specific to this permitting action, is evidenced by the above date.

Interested persons may obtain further information, including copies of the draft permit and statement of basis, by contacting James Bennett at the address and phone number listed below.

U.S. EPA Region III  
Ground Water & Enforcement Branch (3WP22)  
1650 Arch Street  
Philadelphia, PA 19103

Email address: [bennett.james@epa.gov](mailto:bennett.james@epa.gov) and phone number 215-814-5469